

REMARKS

The applicant has carefully reviewed the official action and the references it cites. In the official action, claims 1-3, 11-13, 22-24, and 32-34 were rejected as anticipated by Van Der Vleuten et al., claims 4, 7, 14, 15, 25, 28, 35, and 36 were rejected as unpatentable over Van Der Vleuten et al. in view of Bingham, claims 5, 6, 8, 16, 26, 27, 29, and 37 were rejected as unpatentable over Van Der Vleuten et al. in view of Tani et al., claims 9, 17, 30, and 38 were rejected as unpatentable over Van Der Vleuten et al. in view of Roberts et al., and claims 10 and 31 were rejected as unpatentable over Van Der Vleuten et al. in view of Osawa. Additionally, claims 39-41 were objected to as being dependent on rejected claims but allowable if rewritten in independent form. Claims 18-21 were allowed and, thus, are not discussed in detail below.

By way of the foregoing amendments claims 1, 4, 11, 22, 25, 27, and 32 have been amended and claims 5, 26, and 39 have been canceled, leaving claims 1-4, 6-25, 27-38, 40, and 41 pending in this application. Favorable reconsideration is respectfully requested in view of the foregoing amendments and the following remarks.

Independent claim 1 now recites an encoder that encodes a signal to insert an ancillary code representing a calculated entropy value to preserve an entropy of an encoded portion of the signal. The art of record fails to teach or suggest such an encoder. In particular, while the official action contends that Tani et al. describe a frequency hopping technique that allows preservation of data by removing from hop sequences those communication frequencies which are impaired (e.g., due to transmission channel interference), such a frequency hopping technique does not constitute encoding a signal to preserve an entropy of an encoded portion of a signal, as recited in claim 1. Instead, the frequency hopping technique taught by Tani et al. is a signal modulation technique that may, for example, be used to better convey an

already encoded signal through a communication channel having fixed frequency interferences or other channel degradation(s). The official action has not provided any evidence of how a frequency modulation technique such as that described by Tani et al. can be used to encode a signal to include an auxiliary code to preserve an entropy of an encoded portion of the signal, as recited in claim 1.

The remaining references fail to overcome the above-noted deficiency of Tani et al. Accordingly, the applicant respectfully submits that independent claim 1 and all claims dependent thereon are now in condition for allowance.

Independent claims 6, 11, and 22 are also patentable over the art of record for at least the reasons set forth above in connection with claim 1. Thus, the applicant respectfully submits that these claims and all claims dependent thereon are also in condition for allowance.

Independent claim 32 has been rewritten to incorporate the subject matter of claim 39, which was indicated as allowable in the official action. Accordingly, claim 32 and all claims dependent thereon are also in condition for allowance.

Accordingly, for at least the foregoing reasons, the applicant respectfully submits that all of the claims pending in the instant application are now in condition for allowance. Reconsideration is respectfully requested.

If there are any remaining issues in this application, the examiner is requested to
contact the undersigned at the telephone number below.

Respectfully submitted,

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